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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,661	01/08/2002	Natsuhiko Mori	100725-00068	9809

4372 7590 11/03/2003

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EXAMINER

COMPTON, ERIC B

ART UNIT PAPER NUMBER

3726

DATE MAILED: 11/03/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant N .

10/038,661

Applicant(s)

MORI ET AL.

Examiner

Eric B. Compton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P r i d for R ply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/504,718.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 16, 2003 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-008101 to Matsukawa et al (NIPPON KAGAKU YAKIN KK).

Matsukawa et al disclose a method for producing a sintered oil retaining bearing having a cylindrical bearing body composed of a porous body formed of a sintered metal, the method comprising; charging metal powder into a forming die; imparting a relative motion between the forming die and a forming core rod; and compacting metal powder using the forming die and the forming core rod.

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In Figure 9(a), powder is first charged into the recess between the die (24) and the core rod (28). In Figure 9(b), the core rod (28) is relatively moved (raised) with respect to the die. Next in Figure 9(c) the upper (22) and lower die (30) compact the powder.

An oral translation of the chart of Figure 31, reveals that the last column on the right corresponds to the outer oil leakage "diameter," which in turn would correspond to the diameter of the surface openings. The top row corresponds to the prior art and the bottom row corresponds to their invention. As listed in the chart, the diameter is between 4-20 μm (.004 - .020 mm) and 4-25 μm (.004 - .025 mm) for the prior art and their invention, respectively.

The reference is silent with respect to the percentage of the surface area occupied by the surface openings (i.e., porosity). However, it has been held that where the claimed and prior art products are identical or substantially identical in structure or composition, or ***are produced by identical or substantially identical processes***, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977) (emphasis added). Applicant's invention relies on the same compacting method as Matsukawa et al, including forming opening diameters, which do not exceed 0.05 mm. Since, the compaction process results in forming the openings, which are evenly distributed along the surface, it is believed that the process will result in the same percentage of openings on the surface as Applicant arrives at (e.g. less than 10%).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsukawa et al in view of U.S. Patent 5,704,718 to Mori et al.

Matsukawa et al do not disclose the percentage of the surface area occupied by the surface openings (i.e., porosity).

Mori et al disclose a method for forming a oil sintered bearing by a similar compacting process. "[T]he porosity of the convex portion 4c and the concave portions 4b [of the oil groove] preferably range from 3 to 15% and from 0 to 10%, respectively. As a result, a less amount of oil permeates from the concave portion 4b into the bearing 4 ... and the concave portions 4 function effectively as an oil sump." Col. 10, lines 7-11.

Regarding claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have formed the bearing by the method of Matsukawa et al wherein the surface area occupied by the surface area is less than or equal to 10%, in light of the teachings of Mori et al, in order for the bearing surface to effectively retain more oil.

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R sponds to Arguments

6. Applicant's arguments filed October 16, 2003, have been fully considered but they are not persuasive.

Applicant amended the claims to add the limitation that the percentage of the surface area occupied by the surface openings is 10% or less.

The Examiner believes, first, that Matsukawa teaches a method that inherently provides for a bearing having this claimed feature. Second, if not inherently provided for by Matsukawa, the prior art, Mori et al, nonetheless provides motivation for forming a bearing having this feature. In fact, there is common inventorship between Mori et al ('718) and the instant invention. Thus, Applicant at the time of invention was clearly aware of the benefits that a bearing having porosity less than 10% provides.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (703) 305-0240. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

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A handwritten signature in black ink, appearing to read "Eric Compton", written in a cursive style.

Eric Compton
Patent Examiner
AU 3726

October 30, 2003